



## MYOCARDIAL ISCHEMIA AND INFARCTION

### COMPARISON OF PERI-STENT VASCULAR RESPONSE AFTER SIROLIMUS AND PACLITAXEL-ELUTING STENT IMPLANTATION

ACC Poster Contributions

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Abstract Category: 5. Stable Ischemic Syndrome

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**Background:** Serial IVUS was used to chronic arterial responses and edge effects after implantation of Sirolimus-eluting stent (SES) or Paclitaxel-eluting stent (PES).

**Methods:** 202 angina patients were assigned to SES (n=91) or PES (n=111) implantation. IVUS of 5-mm long segments immediately proximal and distal to the stent was performed after the procedure and at the 9-month follow-up. The change ( $\Delta$ ) of each parameter between postprocedure and follow-up was calculated.

**Results:** The  $\Delta$ Plaque volume increased more in PES than SES in distal reference segment ( $6.6 \pm 15.7$  vs  $1.0 \pm 13.1$  mm<sup>3</sup>,  $P=.016$ ). In proximal 1mm and distal 1mm reference segments, mean Lumen area decreased because of negative remodeling (proximal,  $9.9 \pm 2.4$  to  $9.4 \pm 2.6$  mm<sup>2</sup>,  $P=.004$ ; distal,  $7.6 \pm 2.4$  to  $7.2 \pm 2.4$  mm<sup>2</sup>,  $P=.052$ ) with plaque progression (proximal,  $1.9 \pm 1.5$  to  $2.2 \pm 2.0$  mm<sup>2</sup>,  $P=.095$ ; distal,  $0.6 \pm 1.1$  to  $1.0 \pm 1.4$  mm<sup>2</sup>,  $P=.018$ ) in the PES group. Conversely, mean Lumen area increased because of plaque regression (proximal,  $3.2 \pm 1.8$  to  $2.1 \pm 1.6$  mm<sup>2</sup>,  $P=.000$ ; distal,  $1.5 \pm 1.4$  to  $0.9 \pm 1.3$  mm<sup>2</sup>,  $P=.000$ ) even though there was negative remodeling in the SES group (proximal,  $10.1 \pm 2.4$  to  $9.6 \pm 2.3$  mm<sup>2</sup>,  $P=.019$ ; distal,  $7.8 \pm 2.3$  to  $7.5 \pm 2.3$  mm<sup>2</sup>,  $P=.074$ ). The  $\Delta$ Plaque and  $\Delta$ Lumen at proximal and distal reference segment were more prominent in the PES group than the SES group (table).

**Conclusions:** The PES implantation was associated with luminal reduction accompanied by negative remodeling with plaque progression. These findings, however, were not noted in the SES group.

Area(mm <sup>2</sup> )	Proximal 1mm to Stent		P	Distal 1 mm to Stent		P
	SES	PES		SES	PES	
$\Delta$ EEM	$-0.5 \pm 1.8$	$-0.5 \pm 1.6$	.967	$-0.3 \pm 1.2$	$-0.3 \pm 1.6$	.748
$\Delta$ Plaque	$-1.1 \pm 1.9$	$0.4 \pm 2.0$	.000	$-0.7 \pm 1.4$	$0.3 \pm 1.4$	.000
$\Delta$ Lumen	$0.7 \pm 1.6$	$-0.6 \pm 2.1$	.000	$0.6 \pm 1.4$	$-0.6 \pm 1.5$	.000